REMARKS

Claims 11-15, 17-20, and 29-42 are pending. No amendments have been made herein.

Claims 11-14, 17-20 29-34, and 36-42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Reboh et al. (U.S. Patent No. 4,866,634) ("Reboh") in view of Hedstrom et al. (U.S. Patent No. 6,477,471) ("Hedstrom") and further in view of Vaidyanathan et al. (U.S. Patent No. 6,941,287) ("Vaidyanathan"). Claims 12, 13, 34, 36, and 37 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Reboh in view of Hedstrom in view of Vaidyanathan and further in view of Masch (U.S. Patent No. 5,930,762) ("Masch"). Claims 35, 41, and 42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Reboh in view of Hedstrom in view of Huh (U.S. Patent No. 5,396,612) ("Huh") and further in view of Nawrocki.

Rejection of Claims 11-14, 17-20, 29-34, and 36-42 under 35 U.S.C. § 103

Claims 11-14, 17-20, 29-34, and 36-42 are rejected under 35 U.S.C. § 103(a), as being unpatentable over Reboh in view of Hedstrom and further in view of Vaidyanathan. The rejection is respectfully traversed and reconsideration is requested.

On page 2 of the Office Action, the Examiner asserts that Vaidyanathan's "fitness function" teaches "assessing credibility," as recited in claims 11 and 14. The Examiner cites to Vaidyanathan for a recitation that:

> The fitness function provides a measure of information-richness by examining the distribution of output states over the input feature subspace. If the output states are highly clustered and separated over this subspace, the fitness function should result in a high value as the corresponding input feature combination is doing a good job in segregating the different output states.

Col. 12, lines 50-65. The Examiner interprets the "fitness function" to represent the amount of error in a data set, so it is an assessment of the ratio of correct output from a given input and, therefore, teaches assessing the credibility.

Vaidyanathan does not teach "assessing by the computer the credibility that changes to the set of input financial data are the result of one or more errors," as recited in claim 11. Instead, Vaidyanathan is modeling outputs based upon inputs to the system. Col. 1, lines 12-17. Vaidyanathan attempts to predict the outputs for information-rich subspaces. Col. 3, lines 7-10. Vaidyanathan determines whether subspaces of identified genes are uniform, because the most uniform subspaces are most desirable and provide the most information. Col. 3, lines 21-45. Models may be used to combine subspaces to find combinations of subspaces that provide highly

accurate predictions using test data. Col. 3, lines 53-60. The "fitness function" is a prediction of the accuracy of a model. Col. 3, lines 65-67. Vaidyanathan's fitness function is measuring the order within a data space. Col. 7, lines 39-42.

Vaidyanthan does not assess whether changes to the input data are the result of an error. First, Vaidyanathan does not even discuss changes to the input data. Second, Vaidyanathan does not teach that the fitness function is to determine errors in input data. The fitness function is used to predict the accuracy of a model that has an information-rich subspace. But a subspace that is not information-rich is not the result of one or more errors in the input data. Vaidyanathan does not teach that there are errors in the input data, but rather that the data may need to be transformed to create a better representation of the data. Col. 8, lines 5-10.

The Examiner's citation, reproduced above, emphasizes that the fitness function is a measure of information-richness. The fitness function is not an assessment of whether changes to the input data are the result of an error. Therefore, Vaidyanathan fails to teach "assessing "assessing by the computer the credibility that changes to the set of input financial data are the result of one or more errors," as recited in claim 11. For similar reasons, Vaidyanathan fails to teach "an assessment of the credibility that changes between the information content of the one or more historical values and the information content of the set of input financial data are the result of one or more errors," as recited in claim 14, and "alerting a user that the change between the first information content of the inputted financial data and the second information content of the historical values may be a possible error based on the identified odds," as recited in claim 30, "calculating by the computer the likelihood that changes to the set of input data are the result of one or more errors," as recited in claim 35, "determining the likelihood that changes to the information content of the current data set is not the result of one or more errors," as recited in claim 41, and "mathematically determining, by a computer, a confidence level for the set of input data based upon a comparison between the first and second values, wherein the confidence level is determined using a mathematical calculation of the likelihood that changes between the first and second values are the result of one or more errors," as recited in claim 42.

Thus, Vaidyanathan fails to cure the deficiencies of Reboh and Hedstrom. Because claims 11, 14, 30, 35, 41, and 42 are believed to be allowable, claims 12, 13, 17-20, 29, and 31-34 are also believed to be allowable. Therefore, it is respectfully requested that the rejection of claims 11-14, 17-20, 29-34, and 36-42 be withdrawn.

Rejection of Claims 12, 13, 34, 36, and 37 under 35 U.S.C. § 103(a)

Claims 12, 13, 34, 36, and 37 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Reboh in view of Hedstrom in view of Vaidyanathan and further in view of Masch. As discussed above, Reboh, Hedstrom, and Vaidyanathan fail to teach each and every element of the independent claims. For similar reasons, Reboh, Hedstrom, and Vaidyanathan fail to teach each and every element of claims 12, 13, 34, 36, and 37, which depend on the independent claims and incorporate all of the limitations therein. Masch fails to cure the deficiencies of Reboh, Hedstrom, and Vaidyanathan. Thus, claims 12, 13, 34, 36, and 37 are also believed to be allowable. Therefore, it is respectfully requested that this rejection be withdrawn.

Rejection of Claims 35, 41, and 42 under 35 U.S.C. § 103(a)

Claims 35, 41, and 42 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Reboh in view of Hedstrom in view of Huh and further in view of Nawrocki. This rejection is respectfully traversed.

On page 3 of the Office Action, the Examiner asserts that "Huh discloses the user marking changes as spurious operational errors and storing the information in a database, [and the] Examiner submits that this teaches the claimed feature of 'determining information content of the input data.'" Huh compares copies of records, and if there are any differences, it is labeled as an error. Col. 3, line 52 - col. 4, line 67. By using the percentage of errors in the copies, Huh can provide an error rate. Col. 5, lines 1-4. But Huh does not use the "information content" of the data to determine whether there may be errors. First, Huh is identifying that there are errors, not a likelihood that a change is a result of an error. Second, Huh identifies errors by comparing a first copy (100-12) with a second copy (100-13), and a computer flags any changes that can be later reviewed by a user. Col. 3, line 64 - col. 4, line 15. So Huh's comparison of one record to another to determine changes is not using the "information content."

Moreover, Reboh, Hedstrom, Huh, and Nawrocki fail to teach "determining the a likelihood that changes to the information content of the input data is the result of one or more errors," as recited in claim 35 and similarly recited in claims 41 and 42. Indeed in an attempt to establish a prima facie case of obviousness, the Examiner does not even set forth which cited reference teaches this feature and where such a teaching can be found in the cited reference. As

a result, the previous arguments, which have not been entirely addressed, have been incorporated again for the Examiner's consideration.

In Huh, any changes are flagged as a possible error. Col. 3, line 64 to col. 4, line 7. A user would then examine the contents of the flagged fields and determine whether to mark the fields as containing errors. Col. 4, line 20 to col. 4, line 38. This result is a binary decision. In contrast, in a financial risk management system, changes are not necessarily the result of an error. Huh's error rate is not the same as a likelihood or a confidence level. Huh's "error rate" determines how many errors occurred (*i.e.*, number of errors accumulated), not whether a change was a result of an error. As a result, Huh's error rate assumes that any change is a 100% chance that a change is an error.

When a record changes from one process to another, a user determines a class for that change. Col. 4, lines 20-23. *All of these changes are errors*, so the user only needs to identify the *type* of error. Col. 3, lines 28-32. For example, if an extra space has been inserted, the user would classify the error as a normalization change. Col. 3, lines 35-39. In another example, when a data processor change the value of a data field, the user would classify the error as a spurious-operational change. Col. 3, lines 48-49. Thus, once a change has been identified, the user classifies the change based upon what caused the change. In other words, the user looks at the cause of the error to classify the change.

Also, Huh does not teach or suggest using "input data" and "historical values." Huh analyzes data records after they have gone through processes to determine if the processes have changed the data. *See* col. 1, lines 39-65. The fields in the data records are compared to the fields of the same data records after the processes. *See* col. 3, line 64 to col. 4, line 2. So Huh recites using the same data record, which does not teach or suggest "input data" and "historical values."

Furthermore, in an Office Action mailed February 20, 2007 for U.S. Patent Application Serial No. 10/989,046, Examiner Samica Norman recognized that:

> Reboh et al. and Huh et al. fails to teach wherein calculating the likelihood that changes to the set of input data are the result of one or more errors comprises: (i) calculating the information content of the input data; and (ii) performing a statistical analysis of the calculated information content relative to the one or more historical values to determine the likelihood that changes to the input data are the result of one or more errors.

See pages 7-8. Thus, the Patent Office has recognized these deficiencies in Huh.

The Examiner does not assert Nawrocki for any portion of the rejections of claims 35, 41, and 42. Nevertheless, Nawrocki fails to cure the deficiencies of Reboh, Hedstrom, and Huh. Nawrocki is directed to estimating a level of risk for different securities, not determining whether changes to the information content of the input data is the result of errors. *See* pages 412-13. As a result, Nawrocki calculates the risk by using factors such as rate of return states to "evaluate portfolio performance." *See* pages 415-16. Nawrocki allegedly improves on previous calculations by using weighted entropy. Page 418. But by determining a "relative investment performance" of a financial portfolio, Nawrocki is not "determining the likelihood that changes to the information content of the input data is the result of one or more errors." As recited in the specification of the present application, "One embodiment of the present invention uses a data file containing the results from conventional calculations performed by a PSE Server 101 to perform Content Analysis and thus determine *whether changes in the exposure profile are likely caused by some error in the input data*." Para. [0037] (emphasis added). The present application further recites that a user can "determine if there are errors in the data that need attention." Para. [0042]. Because Nawrocki uses the market data to correlate the reward with the risk, Nawrocki cannot teach a determination that a change to input data was a result of an error. Nawrocki is merely analyzing invested stocks to determine the risk of that investment. Indeed, Nawrocki's use of entropy is not analogous to the problem being solved by the present application.

Thus, Huh and Nawrocki fail to cure the deficiencies of Reboh and Hedstrom. Therefore, claims 35, 41, and 42 are believed to be allowable. Therefore, it is respectfully requested that the rejection of claims 35, 41, and 42 be withdrawn.

CONCLUSION

The undersigned representative respectfully submits that this application is in condition for allowance, and such disposition is earnestly solicited. If the Examiner believes that the prosecution might be advanced by discussing the application with the undersigned representative, in person or over the telephone, we welcome the opportunity to do so. In addition, if any additional fees are required in connection with the filing of this response, the Commissioner is hereby authorized to charge the same to Deposit Account 19-3140.

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Respectfully submitted,

By: /Eric Sophir, Reg. No. 48,499/

Eric Sophir
Registration No. 48,499
SNR Denton US LLP
1301 K Street, NW
Suite 600, East Tower
Washington, DC 20005
(202) 408-6470